

```

                                approx.txt
static int EncontrarColorLibre(Grafo g, int color[], int v){
    int w, N;
    boolean usado[];
    N=g.getNumVertices();
    usado=new Boolean[N];
    for (w=0; w<N; w++){
        if (g.eslado(v,w) && color[w]!=-1)
            usado[color[w]]=true;
    }
    w=0;
    while (usado[w]) w++;
    return w;
}

static int[] AproxColor(Grafo g){
    int N=g.getNumVertices();
    int v,i, nuevo_color;
    int color[], grado[], sindice[];
    color= new int[N]; grado=new int[N];
    sindice=new int[N];
    for (v=0; v<N; v++){
        color[v]=-1;
        grado[v]=g.grado[v];
    }
    Sort.insertion_sort(grado, sindice);
    color[sindice[0]]=0;
    for (i=1; i<N; i++){
        v=sindice[i];
        nuevo_color=EncontrarColorLibre(g, color, v);
        color[v]=nuevo_color;
    }
    return color;
}

```